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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,782	09/15/2003	Samuel H. Duncan	200209082-1	1497

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

CERULLO, JEREMY S

ART UNIT PAPER NUMBER

2112

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,782

Applicant(s)

DUNCAN ET AL

Examiner

Jeremy S. Cerullo

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-7, 9-14, 16-18 and 20-22 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-14 and 16-22 are pending in the following action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 8, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,625,679 ("Morrison" et al.).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

4. As for Claims 1-4, Morrison discloses a method that comprises periodically stalling issuance of device accesses, via simultaneous interrupts, in a multi-processor

system until pending transfers (equivalent to reads) are completed. See Column 8, Lines 26-46.

5. As for Claim 8, Morrison discloses a computer system comprising a plurality of processors coupled to each other (Figures 3-4, Item 120i), at least one of the processors coupled to an I/O device (Figure 3, Item 105) by way of a bridge logic device (Figures 3-4, Item 112i), and wherein the processors cease issuance of I/O device writes until pending transfers (equivalent to reads) are completed (Column 8, Lines 26-46).

6. As for Claim 19, Morrison discloses a computer system comprising a plurality of processors (means for executing programs and instructions) coupled to each other (Figures 3-4, Item 120i), at least one of the processors coupled to an I/O device (means for receiving data from devices external to the computer system and sending data to devices external to the computer system) (Figure 3, Item 105) by way of a bridge logic device (means for bridging a first and second communication bus) (Figures 3-4, Item 112i), and wherein the processors cease issuance of I/O device writes until pending transfers (equivalent to reads) are completed (Column 8, Lines 26-46).

Response to Arguments

7. Applicant's arguments regarding claims 1-4, 8, and 19, filed on 29 September 2005, have been fully considered but they are not persuasive. In Column 8, Lines 26-36, Morrison discloses a system that forces the pending transfers (reads/writes) to be

completed before other actions are taken. The examiner maintains the rejections of Claims 1-4, 8, and 19.

Allowable Subject Matter

8. Claims 5-7, 9-14, 16-18, and 20-22 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

10. Claim 5 is considered allowable, particularly due to the limitation that the allowing each processor to resume issuing device accesses comprises asserting a resume flag within each processor by a primary processor. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

11. Claims 6-7 are considered allowable based on their dependence upon Claim 5.

12. Claim 9 is considered allowable, particularly due to the limitation that the some of the plurality of processors in the system resume issuance of device writes upon the assertion of their flag registers. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

13. Claims 10-13 are considered allowable based on their dependence on Claim 9.

14. Claim 14 is considered allowable, particularly due to the limitation that there is a primary processor that is programmed to allow the system to resume the issuance of

device writes after pending reads are complete. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

15. Claim 16 is considered allowable, particularly due to the limitation that the processor resumes production of device writes when the flag register in the port logic is asserted. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

16. Claim 17 is considered allowable, particularly due to the limitation that a primary processor issues read commands to each of the bus bridges during the interrupt mode. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

17. Claim 18 is considered allowable based on its dependency on Claim 17.

18. Claim 20 is considered allowable, particularly due to the limitation that the means for executing resume issuance of writes upon the assertion of their means for triggering. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

19. Claims 21-22 are considered allowable based on their dependence on Claim 20.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571)

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272-3634. The examiner can normally be reached on Monday - Thursday, 8:00-4:00;
Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JSC



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11/19/06